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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,868	06/29/2001	Thomas D. Fletcher	2207/11272	6555

23838 7590 06/07/2005

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NEW YORK, NY 10004

EXAMINER

NGO, CHUONG D

ART UNIT	PAPER NUMBER
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2193

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/893,868	<b>Applicant(s)</b> FLETCHER, THOMAS D.	
	<b>Examiner</b> Chuong D. Ngo	<b>Art Unit</b> 2193	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-17 and 19-38 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12,15 and 21-24 is/are allowed.
- 6) ☐ Claim(s) 1,5,6,13,14,16,17,19,20,25,33 and 35-38 is/are rejected.
- 7) ☒ Claim(s) 6-9,26-32 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 5,13,14 and 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 5, "the four-to-two reducer", line 1, lacks a proper antecedent basis.

As per claim 13 and 36, it is indefinite as to what the "Miller coupling" is.

Further, the word "compliment" recited throughout the claims should be changed to - - complement - -.

2. Claims 1,5 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Earle. (3,340,388).

As claim 1, Earle discloses in figure 2 a circuit including a first 3:2 reducer and a second 3:2 reducer directly connected to the first 3:2 reducer, a first clock signal (32) connected to the first 3:2 reducer, a second clock signal (42) connected to the second 3:2 reducer.

As per claims 5 and 6, Earle also discloses two set-reset latches (39,40), and a symmetric carry generate gate (figure 3).

3. Claims 16,17,19 and 20 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Winters et al. (6,466,960).

Winters et al. discloses in figures 1 and 3, a circuit having three true inputs and three complement inputs (A,B,C) a differential XOR gate (figure 3B) and a differential carry

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generated gate (figure 3A), and a first transistor (33) connected to the ground. It should be noted that figure 3A contains obvious errors in the connections of the two transistors 25 and 26 in the middle of the circuit (corresponding to the third and eighth transistors) to the other transistors 25 and 26 for implementing a carry generation function ( $AB + AC + BC$ ). The correct connection should have been the same as that discloses in figure 3 of the present application.

4. Claims 25, 33, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winters et al. (6,466,960).

It is noted that Winters et al. does not teach a 4:2 reducer. However, Winters et al. discloses on col.1, lines 35-45, that it is known to implement a 4:2 reducer by cascading two 3:2 reducer as claimed. Thus, it would have been an obvious application to employ two 3:2 reducer as taught by Winters et al. to implement a 4:2 reducer in order to combine four input in a reduced time.

5. Claims 6-9, 26-32 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 10-12, 15 and 21-24 are allowed.

7. Applicant's arguments filed on 09/24/24 have been fully considered but they are not persuasive.

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Regarding to the phrase "Miller coupling", since the specification does not provide any description or refer to a prior art for a clear description of the "Miller coupling", it is unclear as to what the "Miller coupling" is in determining the scope of the claimed invention. A mere statement that the phrase "Miller coupling" is define and would be understood by a person of ordinary skill in the art, without providing any evidence or explanation, does not make it clear what the "Miller coupling" is, and thus is not sufficient to overcome the rejection.

Regarding the rejection of claims 16,17,19 and 20, it is respectfully submitted that figure 3A of Winters et al contains obvious errors in the connections of the two transistors 25 and 26 in the middle of the circuit (corresponding to the claimed third and eighth transistors) to the other transistors in implementing a common carry generation function ( $AB + AC + BC$ ) in the form of  $(A(B+C) + B)$ . The errors would have been readily recognized and corrected by a person of ordinary skill in the art and the correct connection should have been the same as that disclosed in figure 3 of the present application.

Regarding the rejection of claims 25, 33 and 35-38, it is respectfully submitted that White et al. clearly disclosed the reducer implemented using dynamic domino logic as claimed (see the linking paragraph of columns 4 and 5).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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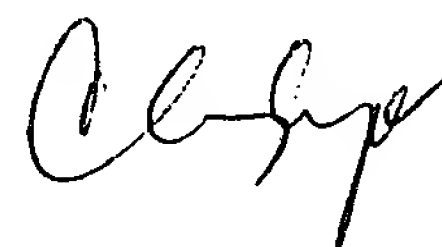
MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/19/05



Chuong D Ngo  
Primary Examiner  
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